

1. A method for transferring data in a network processing device, comprising:  
reading a current entry in a receive memory;  
identifying a time slot period for receiving the data according to the current entry in

10 the receive memory;

identifying a current receive channel register in the network processing device to write  
the received data according to the current entry in the receive memory;

receiving data for the identified time slot period into the identified current receive  
channel register;

15 moving the current entry to a next entry in the receive memory when the time slot  
period expires;

identifying a next time slot period and a next receive channel register according to the  
next entry in the receive memory; and

20 receiving data into the identified next receive channel register for the identified next  
time slot period.

2. A method according to claim 1 including moving to a beginning entry in the  
receive memory when a last entry is identified in the receive memory and the time slot period  
expires.

3. A method according to claim 2 including waiting for a next synchronization  
pulse before shifting data into the receive channel register associated with the beginning  
entry.

4. A method according to claim 1 including moving to a beginning entry in the  
receive memory whenever a synchronization pulse is detected.

5. A method according to claim 1 including:

reading a current entry in a transmit memory;

5 identifying a time slot period for transmitting the data according to the current entry in  
the transmit memory;  
identifying a current transmit channel register in the network processing device  
according to the current entry in the transmit memory;  
transmitting data for the identified time slot period out from the identified current  
10 transmit channel register;  
moving to a next entry in the transmit memory when the time slot period expires;  
identifying a next time slot period and a next transmit channel register according to  
the next entry in the transmit memory; and  
transmitting data out from the identified next transmit channel register for the  
15 identified next time slot period.

6. A method according to claim 5 including moving to a beginning entry in the  
transmit memory when a last entry is identified in the transmit memory and the time slot  
period expires.

20 7. A method according to claim 6 including waiting for a next synchronization  
pulse before writing data into the transmit channel register identified by the beginning entry.

8. A method according to claim 5 including moving to a beginning entry in the  
transmit memory whenever a synchronization pulse is detected.

9. A method according to claim 5 including loading different entries into the  
receive memory and transmit memory according a TDM data stream format used for  
transmitting and receiving the data.

30 10. A method according to claim 5 including reading the receive memory and  
receiving data into the receive channel registers and reading the transmit memory and  
transmitting data out from the transmit channel registers at the same.

35 11. A system for transferring data in a network processing device, comprising:

5 means for reading a current entry in a receive memory;  
means for identifying a time slot period for receiving the data according to the current  
entry in the receive memory;  
means for identifying a current receive channel register in the network processing  
device to write the received data according to the current entry in the receive memory;  
10 means for receiving data for the identified time slot period into the identified current  
receive channel register;  
means for moving the current entry to a next entry in the receive memory when the  
time slot period expires;  
means for identifying a next time slot period and a next receive channel register  
15 according to the next entry in the receive memory; and  
means for receiving data into the identified next receive channel register for the  
identified next time slot period.

12. A system according to claim 11 including means for moving to a beginning  
entry in the receive memory when a last entry is identified in the receive memory and the time  
slot period expires.

13. A system according to claim 11 including means for waiting for a next  
synchronization pulse before shifting data into the receive channel register associated with the  
beginning entry.

14. A system according to claim 11 including means for moving to a beginning  
entry in the receive memory whenever a synchronization pulse is detected.

15. A system according to claim 11 including:  
means for reading a current entry in a transmit memory;  
means for identifying a time slot period for transmitting the data according to the  
current entry in the transmit memory;  
means for identifying a current transmit channel register in the network processing  
30 device according to the current entry in the transmit memory;

5 means for transmitting data for the identified time slot period out from the identified current transmit channel register;

means for moving to a next entry in the transmit memory when the time slot period expires;

10 means for identifying a next time slot period and transmit channel register according to the next entry in the transmit memory; and

means for transmitting data out from the identified next transmit channel register for the identified next time slot period.

16. A system according to claim 15 including means for moving to a beginning entry in the transmit memory when a last entry is identified in the transmit memory and the time slot period expires.

17. A system according to claim 16 including means for waiting for a synchronization pulse before writing data into the transmit channel register identified by the beginning entry.

18. A system according to claim 15 including means for moving to a beginning entry in the transmit memory whenever a synchronization pulse is detected.

19. A system according to claim 15 including means for loading different entries into the receive memory and transmit memory according a TDM data stream format used for transmitting and receiving the data.

20. A system according to claim 15 including means for reading the receive memory and receiving data into the receive channel registers and reading the transmit memory and transmitting data out from the transmit channel registers at the same.

21. A computer readable medium for storing software for transferring data in a network processing device, comprising:

code for reading a current entry in a receive memory;

5 code for identifying a time slot period for receiving the data according to the current entry in the receive memory;  
code for identifying a current receive channel register in the network processing device to write the received data according to the current entry in the receive memory;  
code for receiving data for the identified time slot period into the identified current  
10 receive channel register;  
code for moving the current entry to a next entry in the receive memory when the time slot period expires;  
code for identifying a next time slot period and a next receive channel register according to the next entry in the receive memory; and  
15 code for receiving data into the identified next receive channel register for the identified next time slot period.

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22. A computer readable medium according to claim 21 including code for moving to a beginning entry in the receive memory when a last entry is identified in the receive memory and the time slot period expires.

23. A computer readable medium according to claim 21 including code for waiting for a next synchronization pulse before shifting data into the receive channel register associated with the beginning entry.

24. A computer readable medium according to claim 21 including code for moving to a beginning entry in the receive memory whenever a synchronization pulse is detected.

30 25. A computer readable medium according to claim 21 including:  
code for reading a current entry in a transmit memory;  
code for identifying a time slot period for transmitting the data according to the current entry in the transmit memory;  
code for identifying a current transmit channel register in the network processing  
35 device according to the current entry in the transmit memory;

5           code for transmitting data for the identified time slot period out from the identified  
current transmit channel register;  
          code for moving to a next entry in the transmit memory when the time slot period  
expires;  
          code for identifying a next time slot period and transmit channel register according to  
10 the next entry in the transmit memory; and  
          code for transmitting data out from the identified next transmit channel register for  
the identified next time slot period.

15 26.    A computer readable medium according to claim 25 including code for  
moving to a beginning entry in the transmit memory when a last entry is identified in the  
transmit memory and the time slot period expires.

20 27.    A computer readable medium according to claim 26 including code for waiting  
for a synchronization pulse before writing data into the transmit channel register identified by  
the beginning entry.

25 28.    A computer readable medium according to claim 25 including code for  
moving to a beginning entry in the transmit memory whenever a synchronization pulse is  
detected.

29.    A computer readable medium according to claim 25 including code for loading  
different entries into the receive memory and transmit memory according a TDM data stream  
format used for transmitting and receiving the data.

30 30.    A computer readable medium according to claim 25 including code for reading  
the receive memory and receiving data into the receive channel registers and reading the  
transmit memory and transmitting data out from the transmit channel registers at the same.